**Script Documentation: gcs\_first\_day**

* **Overview**: This script generates a table that computes the Glasgow Coma Scale (GCS) for patients based on data from different systems (CareVue and Metavision). It captures GCS values for the first day of ICU stay and incorporates logic for handling sedated patients.
* **Key References**: The script references the SAPS II publication regarding the treatment of GCS for sedated patients.
* **Logic Summary**: The script first pivots GCS components from various ITEMIDs into a unified format, adjusts values for intubated patients, and computes a composite GCS score. It identifies the minimum GCS for each ICU stay and flags intubated patients.
* **Process Steps**:
  + **Data Preparation**:
    - The base Common Table Expression (CTE) pulls GCS data from chartevents, merging ITEMIDs from both systems and limiting data to the first 24 hours of ICU stay. It flags intubated patients based on verbal responses.
  + **GCS Calculation**:
    - In the gcs CTE, the script calculates the GCS score using current and previous values, applying specific logic for sedated and intubated patients.
  + **Final Selection**:
    - The gcs\_final CTE determines the minimum GCS for each patient, enabling the identification of the lowest GCS during their ICU stay.
* **Output**: The script produces a table containing:
  + Subject, hospital admission, and ICU stay identifiers.
  + The minimum GCS score and individual components (GCSMotor, GCSVerbal, GCSEyes).
  + A flag indicating if the patient was intubated (EndoTrachFlag).
* **Example Query**:

sql

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SELECT \* FROM gcs\_first\_day;

* **Important Notes**:
  + The script uses COALESCE to handle missing values effectively, ensuring that GCS calculations default to standard values when necessary.
  + It accommodates cases where intubation impacts GCS readings, ensuring accuracy in patient assessments.
* **Conclusion**: This script facilitates the accurate computation of GCS scores in ICU patients by systematically integrating and processing data from multiple sources while addressing complexities related to patient sedation and intubation.